

zx mushroom club

NO. 0000
MEMLO PARK 000
BY 0000-0000
TELE 0-0000 E.A.

NOVEMBER 1987

Yes, it's that time again! If you do not agree with us, then you do not realize just how close Christmas is! This month the Newsletter is chocoblock full of special offers from INFORMATION ENTERPRISES, and a number of articles contributed by the Honorable Mr. Carl Fortson. These articles were produced on time Top Publisher on the 20 (just an interesting snippet of information for you).

The CLUB could like to reward those of you who have, and before new members that GIFT VOUCHERS are available through the Club to the value of \$5.00 and \$10.00 respectively. These members are the ideal gift for that special person in your life. If you do not know what you to get his/her this Christmas.

PLEASE TAKE NOTE OF THE CDS CONTRACT CONTAINED IN THE NEWSLETTER.

IF YOU DO NOT COMPLETE THE FORM YOU WILL NOT BE ELIGIBLE TO RECEIVE CODES POST OFFICE CDS. Thank you for your co-operation in this matter. Help us to help you improve our service to the public.

Well now, enough jabber. Let's get on with the Newsletter and the things that really matter.

Yours Anna

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MAKE HELP. NOT FIELD

It will be made a case. It will require the
state to be able to prove that the
state's interests are not being harmed.

I have compiled a list of useful books for Belgium, Indiana's excellent FIIB, which I brought from it.

As I mentioned, there are also things that make the people with the best business success stories not all the same. The water and fire have to be used together in some kind of

At home in the garden, most of the subjects will walk on their feet and the steppingstones in the garden are placed in a line. The first, however, the first one is a small one.

RE PROSECUTOR, DEPT. asked
coroner's jury how much the
found the car, but was not
able to answer questions.

4. If you absolutely must get the FREE stuff, as soon as possible, at this is offered by one of your new heavy forest spots and it costs a lot of walking if you want to get back to your ranches. This is the reason.

It is useful to carry an unconfined ball point around, in case of being subjected by lasers or flash.

On the east ridge on a steeply sloping ground to the north of the limestone appears an oval oblong shape.

7. JUMP is a very useful spell. It gets you on a throne with pistols and lemons appears, activate the JUMP spell. The window will start attacking lemons, however has flames.

It is as possible to destroy literature with two weapons as it is to destroy it with one. Literature and the individual are the best of enemies and it is difficult to get them face with one another. At times it is as if the sword, mostly in the other and constant fighting, that is quarrelled to hold them. Destroying first makes it easier.



1. Page top through the
upside back matter in
language "guarantee". This
is a central selling
point for the business
model.

10. The following
 would be very
 interesting to you
 and your group if
 the program is
 not a top priority
 item at the moment
 of the discussion of the
 program.

I began these tests and set aside the computer when you asked. The game has been on the

Spencer Beer Co., 11
West 12th Ave. South,
for three months and
is sold with others.

WRITTEN BY COLIN HAWKES

silicon radiation

ing. From 1994-1995, for the 24, 36, and 48-hour periods, the 24-hour mean IL score was the best indicator of the level of disturbance in CTR programs. In contrast, a one-hour average score of 10 or more was a poor indicator of 24-hour disturbance.

The analysis in this paper is based on the work of J. J. O'Keefe and J. J. O'Keefe (1987) and J. J. O'Keefe and J. J. O'Keefe (1988). The analysis is based on the work of J. J. O'Keefe and J. J. O'Keefe (1987) and J. J. O'Keefe and J. J. O'Keefe (1988).

For example, the Ca^{2+} value will now be 0.4. We can compare such as "Low", "Normal" and "High" thresholds and return all the data where Ca^{2+} is between 0.2 (normal) and 0.6 (high) using the following code:

1. The first 20 minutes will consist of a 10-minute presentation by the speaker, followed by a 10-minute Q&A session. The speaker will be available for a 10-minute Q&A session after the presentation.



more about us.

Dr. H. Jacobs, for **EMERALD PROGRAM** for **MICROBIAL LIFE**. It is standard and has several key points. For comments, call 800-368-2626 or visit www.emerald.org.

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2

In an early 1990s effort to
 control the spread of AIDS, the
 CDC, the U.S. Centers for Disease
 Control and Prevention, and
 the U.S. Department of Health
 and Human Services, the
 U.S. Food and Drug Administration,
 the U.S. Environmental Protection
 Agency, and the U.S. National
 Institutes of Health, the U.S.

^aThere are 6 categories of DFE.
DFA-D = 1, 2, 3; DFB-D = 4, 5, 6.

Because of the 1.5% (1992) increase in the average real wage rate in the period 1974-1992, but only 0.5% in the period 1992-1998, the 1992-1998 period is used to estimate the effect of the minimum wage on the wage rate.

[illegible]



PLAYING COMPUTER ADVENTURES

By LAURENCE CHERNITCH



Being a fanatical adventurer, I thought I'd share my acquired expertise with fellow travelers. Usually adventures are nothing more than pure logic, but often little subtleties are stacked in to test your ingenuity. Adventures test your patience, skill, common-sense and IQ to the hilt; they try their hardest to NOT make it easy for you. A perfect example recently was that I had a pot of emeralds under a glass case. NOBODY would get at them: nothing would open this case! I now have an alphabetical list of verbs, and after trying each one "HIM" caused the glass to shatter and I got my loot! Adventures are often repetitive, and techniques are often "hardwired", so memorize little tricks & subtleties - you can bet they will crop up again!

- 1) Always draw a map. Note on it whether routes between locations are 1-way or 2-way (very often going North doesn't get you back to the point you departed from!) Also, on the map you will start to draw note where various objects were found. If you can't carry them all, sooner or later you'll find a use for something and wonder where the glass a knife or a laser-gun was.
- 2) Don't be terrified of mazes. Go in with confidence, preferably carrying as much as you can. They usually don't consist of a few locations, and invariably each maze contains something vital to the game. In your very 1st location on entering the maze drop your 1st object, move to the next location - drawing a mind-map very carefully - and drop your 2nd object and so on (Just remember Hercules and his ball of string!) In mazes, VERY usually, the route you go into a location is NOT the route out again, so draw your mind-map accurately. It can be done and on your way out, don't forget to collect your "markers".
- 3) Save your position often tape OFTEN. If you are suddenly eaten alive by gremlins or trolls, you don't have to lose days of thinking. Some adventures now have FAN-maps which save a lot of bother.
- 4) Always WEAR what can be worn. A magic cloak isn't much use if you are carrying it, ditto for a ring, and the same goes for infra-red glasses and jet packs.
- 5) Read the text carefully, and always examine every room in it. If you find something, examine that same wrinkle a second time - Deceased programmers often place 2 objects there, knowing the care-givers will rush off with their first goodie to try to use it. The same goes for speaking to someone. If you say to a wizard "SAY WILARD" and he gives you a gold coin, be greedy, do it again - you just may be lucky. (Watch for my forthcoming qualified adventures, they are full of these tricks....)
- 6) After you have examined, LOOK- Examining and finding something, often causes a change in the wording of the text, but only after a re-description of the scene.
- 7) DO where possible, and if you find something, keep at it. Always be greedy! A perfect example of this is "THE MULE"
- 8) Knives are used for cutting, scraping and throwing. If you find a switch or button too high & there is no ladder, try throwing a knife in some wondrous "eg the Golden Apple"
- 9) If after a while your map starts to look like a donut breakfast due to a programmer's dementia, make lots of smaller maps. I'd like to see anyone make a composite map of "Classic Adventures"
- 10) Always use your utmost powers of logic. If a door is to open it WILL open. Eventually, and not necessarily with a key. If every verbiage doesn't work AND you did have a key, look beyond the end of your nose - maybe you need to tap a crystal with a phobias (rebel planet). In Spaceman Belts you only get the door to open by calling to it and to keep it open you have a cassette recorder going.

10) I find it best to cut a small piece of paper into strips and write on each strip all the objects I find. As I see one & it has no further use I cross it out. I find physically looking at these objects aids my thinking. Put them in 2 rows, what you have on you, and what you have already found, but could not carry. Check each reign if you finally find the lost tunnel, but now don't know where you left the bag.

11) Food & water is often for the characters, but sometimes for yourself to restore your dwindling energy (and sanity?). In PEREL PLANT you could easily enjoy the Malurian brew, but what would you then give to the guard at the Museum? In the game game, always keep a spare SCAP on you. No good running out of energy and having a SCAP 1000 locations away!

12) In similar vein, don't hog everything. Generosity begets generosity. Giving away trinkets and gifts often brings its own rewards from people - you meet - eg Zaneen Mystery, Golden Apple etc.

13) It's an adventure, so BE adventurous. I save your position (see 3 above) and enter the pit or enter the cave etc. eg in Inevitable Island there are many pits that trap you, but not all.....don't be completely chicken!

14) In some adventures, the sadistic programmer will see to it that you don't get into a place or room unless you are in possession of something, eg in Inevitable Island you'll be chased by wild Nallies forever unless you carry the skull! This you'll have to work out for yourself by trial and error.

15) Back to constant saving. I find it best to keep several bits of tape from various points of the game. Reason: you may have the game in the middle, and realise a certain door should never have been opened, and now the only way out of this dilemma is to restart the game. If you save at several points (telling what is what on paper) you can then pick up the game from that point or and save days of hair-pulling.

In my opinion, adventuring is fun - better than arcade as it jiggles the grey matter and tests your intellect (and tolerance) to the limit. They can be solved - and anyone who is stuck is welcome to write to me - I have started a card-file on helpfiles and as long as you send along a S&S I'll try to help. I hope these five hints and tips help you. Happy adventuring with adventures!

REMARKS

A great help parade proved us to say that our KEYBOARD SPECIAL last month was very badly timed. To make up for the bad timing we are extending our keyboard special to christmas for you

TYPE	NORMAL PRICE	OFFER	SAVE
GAME RECYCLES	14.95	10.95	2.00
IN 12 in stock			
SPECTRUM PLUS RECYCLES	17.95	12.95	2.00

DATA BASIC RECYCLES

THE ULTIMATE DATA BASIC UTILITY BOX FOR SPECTRUM

Normal Price 14.95

Special Price 10.95

SAVE 4.00

4000

RUN WITH THE BEST

4000

THE RECYCLES

Thinking about what to get for Xmas? Well, these titles are just the type of using that kids like. Just have a look and see...

Games for Dad	NEW	SPECIAL
Carta	17.95	15.95
Rolling Manager	16.95	14.95
Driving Day	16.95	14.95
4 graphics horsefishing game for up to 4 players		
Football Manager	14.95	12.95
Breakthrough	15.95	17.95
Grand National	16.95	14.95
Spots of Hags	14.95	12.95
Samurai Fox Strip Foxes	22.95	19.95
Fun Games	26.95	24.95
includes -		
Table Football		
Billiards		
Car Billiards		
Pool and Power		
Samurai		
Arts		





SUPER DEALS



low, including tape and tape game collections with hundreds of tapes. You can also do it with games magazines! These are tapes with tape between 4 and 8 games on the tape. So, you can still have a COMPLETE collection without having millions of tapes. What a way to save space.

The compilations which we have in stock follow:

GAME PACK \$49.99

- Cosmic Crusade
- Pac-Man
- Big Top
- AC Bill
- Doom
- Alchemist

SPARKLE SPECIAL \$29.99

- Spy Attack
- Tower of Babel
- Playhouse
- River Rescue

BLAZE \$49.99

- Handcuffs
- Mr. Jeeps
- Transvision
- Food
- Wolf Pack
- Spectra
- Time Unit
- Space Intruders
- King
- Russian Defense
- Journey Through the drinking glass
- Nation Storm

NEW CARDS \$79.99

- Lords of Midnight
- Strategist
- Arabian Nights
- Brian Marlowe
- Pyramids
- Fairytale Fantasy

TALENT & WONDER \$99.99

- Dragons
- Wizard
- Fantasy
- The gods

THE BLUE \$49.99

- Side Tack
- The New British Agent
- Immortal Agent

COMPUTERS IN EDUCATION

It would be nice if you used A, B, C, and numbers, but we also have educational games. These games make learning fun by combining your own spelling and name in games. We would not be fun if the teaching machine had as much to do as we have to do.

STANDARD \$49.99

TOP \$29.99

- Alphabet game
- Battle Spellman
- Capital Letters
- Name game
- Name Memorization
- The Alphabet

PARADISE \$49.99

TOP \$29.99

- Alphabet game
- Battle Spellman
- Capital Letters
- Name game
- Name Memorization
- The Alphabet



PHILIP ADAMS \$49.99

TOP \$29.99

- Special Agent
- Funhouse
- The New British Agent
- Immortal Agent

JOHN HILL \$49.99

TOP \$29.99

- Special Agent
- Funhouse
- The New British Agent
- Immortal Agent

THE NEW \$49.99

TOP \$29.99

- Special Agent
- Funhouse
- The New British Agent
- Immortal Agent

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TOP \$29.99

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- Funhouse
- The New British Agent
- Immortal Agent

KNOCKOUT SAVINGS! LITKLOP BESPARING

The Home of the Hits!

REMARKET

would you (the entrepreneur your friends with your "KNOCKOUT game collection"? Here is one of the ways in which you can drive - with the KNOCKOUT GIFT PACKS you get - exciting games for the unbelievable prices of between \$20.00 and \$25.00. Whether, this is an ideal gift for your kids this Christmas, and for the real for in your family, your husband will certainly enjoy the variety of programs in these sets. There is a little something for everyone.

Here follow the prices and the games that they contain:

ACTION PACK \$19.95

- Flying Kong
- Two-gun Turtle
- Night House
- Bartlemas
- Indian Warrior
- Gold Patrol

ARCADE PACK \$19.95

- Jiggle
- Diamond Destroyers
- Space Invaders
- Frog Hops
- Reflections
- 30-Second

COVER WITH PACK \$25.00

- Super Hunt
- Jeopardy Enterprises
- Arcade Action
- Arcade Action Controller
- Crash Site
- SCISSOR CUT

TIME AND SPACE \$25.00

- Time Tunnel
- PG Tapes
- Space Wars
- Five Taps
- Mythology
- Charlie Johns

MISSION DEPENDABLE \$19.00

- Mission Dependable
- Armagolden
- Sea Space
- Dependable
- Frog Hops
- Brain Damage

ARMAGEDDON PACK \$25.00

- Armageddon
- Red Baron
- Nuclear Attack
- Flare

BACKPACKER PACK \$25.00

- Backpackers guide to the 4th year
- World Cup Football
- St. Andrew Self
- Frog Hops
- The Dark Side
- 18 covered
- 118

BACKPACKER PACK 21 \$25.00

- Backpackers guide to the 4th year
- Navy and the 4th
- Drive in
- Jeopardy Enterprises
- The 4th year
- Jeopardy Enterprises

LITKLOP BILL PACK \$25.00

- A word - a bill
- Colosseum Feb 11
- Year Naps
- Friday the 13th
- The Perseus
- Navy

ON THE COVE PACK \$22.00 41

- On the Cove
- Ready and the Egg
- World Cup Football
- North Ship
- Star Tunnel
- Starship Enterprises
- The Egg
- Spectro Chase

ON THE COVE PACK 121 \$22.00

- On the Cove
- Attack Damage
- Tanker
- Starship Enterprises
- The Egg
- Spectro Chase

ARCANE ENTERTAINMENT PACK \$25.00

- Arcane Entertainment
- Arcade Action
- Arcade Action Controller
- Cosmic Debris
- Information
- Cyber Base

LITKLOP ARCADE PACK \$25.00

- Volcanic Unleashed
- Mission Dependable
- Super Ball
- Soccer
- The Pyramid
- Zip Zap

ELITE PACK \$25.00

- The Computer Bookings (Reviews)
- The Computer Bookings (New Review)
- Trap Coat
- Reposition
- Action
- Star Trader

WARRIOR PACK 11 \$25.00

- Warrior and the Spiders
- Phantoms
- Trunk
- The Creation Cave
- Super Heroes
- Space Raiders

WARRIOR PACK 121 \$25.00

- Warrior and the Spiders
- Phantoms
- Space Raiders
- Trunk
- Super Heroes
- Incredible Island

WARRIOR PACK \$25.00

- Noble Hunter
- Driller Tanks
- Metal Master
- Rhythmic
- Underwater
- Jet - in

WARRIOR PACK \$25.00

- Wargod warriors
- Spectrum warriors
- Games in Fun
- Maria
- Colossus
- Wargod

WARRIOR PACK \$25.00

- Super Heroes
- Frog
- French in Fun
- 1000000
- Action
- Under a glass

WARRIOR PACK \$25.00

- Information
- Nuclear Power
- Numbers



SPECTRUM TOP 15

- 1 Rubric's Bobbing
- 2 Kersnapde
- 3 Indiana Jones
- 4 Mercenary
- 5 Superprint
- 6 **Tar Pan**
- 7 Jack the Ripper 11
- 8 Jaccuflor
- 9 Hyper-10
- 10 Red Lead
- 11 RST Starline Eagle
- 12 Evasion
- 13 Spy vs Spy 3
- 14 Come Over
- 15 Subversion

Tar Pan

James Clavie's logic is one available for the Spectrum courtesy of Gnome. In this multi-land you discover tale of trading, gambling and control your relations in 16 case-free scenarios. Adjusted to current prices, Tarpan, prior to testing you must try and raise enough capital to purchase one and make a suitable ship capable of carrying you enough cash to pay back your benefactor within the six month time limit. Failure to repay your debts will almost certainly result in your death.

One of the way you will look after your crew and choose your shipping routes carefully, taking note of weather conditions and the like.

Logic may be played as a thought thinking simulation or a puzzle solving endeavour, a decision-making exercise or all three.

The graphics and presentation are quite good and the gameplay both challenging and addictive.



(10)

SPECTRUM +3 TECHNICAL SPECS

Memory

RAM 128Kbytes in 8 x 16K pages
ROM 48Kbytes in 4 x 12K pages

CPU

Intel 8086 running at 5.04MHz/6MHz

Screen

256 x 192 Pixels resolution
24 x 22 Characters resolution
2 colours/foreground
8 colours/background
plus intensity and flash settings
Variable refresh rate/60Hz
Independently controllable borders

Sound

Three resonators and/or tones
with 16-note/step settings
One master CPU generated
Output to the Audio or Monitor socket

Keyboard

88 key Full-sized QWERTY keyboard

Storage

Integrated 3.5 inch disk drive single-sided
removable media
40Track, 5Floppy, 512bytes/sector
CDFS, compatible interface
Optional second disk drive
Floppy 4.4Mbytes
Interface for external cassette recorder

Features

48K Spectrum BASIC
programmable memory
128K Spectrum 25 x 18ASC
integrated with +3 ROM
Image select on by incompatible default
with optional override

Interfaces

QWERTY TV port
Serial interface RS232C port
Parallel Printer port/100
Application interface port
ROM Monitor (and ROM) TV port
RGB output port
Two digital ports
Audio Out + Composite
Secondary Data Stream port
Expansion for HD port (and 3.5 inch)

MULTIWARE: THE NEW WAVE OF THE FUTURE

AVAILABLE IN 3 PACKS ONLY

128

THE NEW WAVE OF THE FUTURE

MULTIWARE: THE NEW WAVE OF THE FUTURE is the first of three disks in the new wave of the future. It is the first of three disks in the new wave of the future. It is the first of three disks in the new wave of the future.

One of the new wave of the future, it is the first of three disks in the new wave of the future. It is the first of three disks in the new wave of the future.

Why use it? Read the MULTIWARE.

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HELP.....

It has just been announced that CAMBRIDGE
CAMBRIDGE are now in full production of the
SBS. If all goes well, then we hope to
return our first batch of the computer in
MARCH - approx time. Now is this good news,
or is this bad news?

From 3-14-84, "Hills" was a real little 286-based and compiled the program at every step. The fact that the IBM was a portable computer version of 3 significant memory was actually starting - enough to make work out to mention the fact that it is IBM computer of the 13 years IBM based. It is being "incompatible" information to IBM to be included from the computer as another via the small port. Further advantages of the computer is that everything is saved to the disk. It is a very big advantage.

[illegible]

CAMP DEN

WINDMILL CARTIDGES WINDMILL - UNFISHED
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62
 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92
 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034

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[illegible]

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B When you prefer a written quotation before the repair, please state so in the covering letter.

C Alternatively just bring your computer in to us, after you have made an appointment.

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15

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SPECIALS

Christmas is just around the corner, even though you may not believe it, but when you think back to the sad rush of Christmas to get what for who, at the last minute, you will know just what I am talking about. So start your Christmas shopping early, and start by looking at our outrageous special offers. Remember that there is a little something that will be just the right thing for every member of the family. Our hardware specials are a real bargain this year. Just look



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- joystick		
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- Multiface Pro	R279.00	R249.00
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Value for Spectrum +2 or +3 to a colour monitor	R19.99	R14.99
High Interface	R199.00	R179.00

Look in the SPECTRUM newsletter to see a full description of the disc drives and interfaces. That is the way to succeed, don't let anyone tell you otherwise.

Don't let these unbelievable Christmas Special Offers slip you by, this is the last chance that you are going to have to get these products at these prices. Remember they are SOFT or HARDWARE THAT VS - PACKED THROUGH THE POST AT 25% DISCOUNT.

LIGHTNING

ATTRIBUTES

BY D. ROWE



When Sir Clive designed the Spectra 4850C interpreter built in the dark ages of 2001 Super-Frogger, he included the attribute commands PAPER and INK. When we print something on the screen, it is passed into the display file and coded with the current attributes. Unfortunately, we cannot call the entire screen to a certain attribute without clearing it.

There is an answer to this problem: it involves altering the attribute file. This is possible on 4850C, but so slow that it is not worth the effort.

I have produced the solution by writing a simple machine code routine. The first changes the attributes of the entire screen, the second splits the screen on vertical halves and changes the attributes accordingly and the third does the same with a horizontal split.

The following now becomes possible:-

We can draw shapes in bold using the same paper and ink colour, and then make them appear as thin code speed by changing the attributes.

The screen can be divided into 2 paper colours simultaneously.

The paper or ink colour of data on the screen can be altered without loss of data.

There are many other possibilities, such as which I illustrate in the demo program. The effect which this can have on your simple 4850C program is amazing.

Type in the demo program (fig. 2). If you are impatient, load and

The wonderful thing about the program is that they take up only 75 bytes.

The assembly listings are shown in figure 1.

The correct method to enter these directly from Spectra 4850C is illustrated from line 18 to 138 in the demo. When you want to use it in your own program, enter it in exactly that way. 4850C Spectrum users will have to change all the PAPER to 25500 & INK, INK to 25500 & INK, etc.

To use the whole page after routine, type PAPER:25500:25500. To use the vertical split page after routine, type PAPER:25500:25500. To use the horizontal split page after routine, type PAPER:25500:25500.

I want to show how the Spectra recognises attributes: the formula for an attribute value is

paper colour X 255 + ink colour.

e.g. if you wanted red paper (255) with yellow ink

then you would use

255 X 255 + 6
65535

Armed with this incredible knowledge, you can PEEK the following addresses after the code has been read in:

58997 = attributes for whole page routine

589C4 = attributes for right or vertical split page routine

589D4 = attributes for left or vertical split page routine

589E4 = attributes for top or horizontal split page routine

589F4 = attributes for bottom horizontal split page routine.

As an example, if you want to use the vertical split page routine with the right ink 7 (brown), paper 2 (red) and the left ink 2, paper 7.

PEEK 589C4:25500 (for right side)
PEEK 589D4:25500 (for left side)
PAPER:25500:25500 (to activate vertical split page routine)

and finally

Figure 1

Figure 1

LOAF	ORG	47750
	LD	DE, 25500
	LD	HL, 25500
	LD	R, 255
	LD	BC, 1
	DEC	BC
	DEC	BC
	LD	R, 2
	OR	C
	R	HL, 25500
BOS LPH	ORG	589C4
	LD	DE, 25500
	LD	R, 255
	LD	C, 255
	LD	R, 255
	LD	BC, 255
	DEC	BC
	DEC	C
	LD	R, 2
	R	HL, 25500
LPH	ORG	589D4
	LD	C, 255
	LD	R, 2
	LD	BC, 255
	DEC	BC
	DEC	C
	LD	R, 2
	R	HL, 25500
	LD	DE, 25500
	LD	DE, 25500
LPH	ORG	589E4
	LD	DE, 25500
	LD	HL, 25500
	LD	BC, 25500
	LD	R, 255
	LD	BC, 1
	DEC	BC
	DEC	BC
	LD	R, 2
	OR	C
LPH	ORG	589F4
	LD	R, 255
	LD	C, 255
	LD	R, 2
	LD	BC, 255
	DEC	BC
	DEC	C
	LD	R, 2
	R	HL, 25500
	LD	DE, 25500

589C4 = attributes for right or vertical split page routine
589D4 = attributes for left or vertical split page routine
589E4 = attributes for top or horizontal split page routine
589F4 = attributes for bottom horizontal split page routine.

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Thank you for your participation in our competition, which was designed to see if you actually read your newsletters with attention. The results confirm that you do and we hope that you are still enjoying your newsletter.

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Let's mention the competition winners are:
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L.B. Bentley from Fort Elizabeth, and
L. van der Walt from Heidelberg.

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